UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *12 October 2009*.
2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *7-11 and 18-24* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) *7-11 and 18-24* is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All   b) ☐ Some * c) ☐ None of:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of claims 18-24 in the reply filed on October 12,

2009 is acknowledged.

In view of Applicant's amendment to claim 7 the election requirement has been

withdrawn.

Claim 7 is currently amended.

Claims 7, 18 and 21 were previously amended on May 20, 2009 in response the

non-final office action dated February 12, 2009.

Claims 1-6 and 12-17 are canceled.

Claims 7-11 and 18-24 are currently pending.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form

the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 21 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by

Wilson (US 2002/0087698).

As per claim 21, Wilson teaches a method of connecting plural applications to a remote resource, comprising:

receiving a first request from a first application, located on a client computer, to connect to a remote resource (see ¶0028 and Fig. 1, ref. 14, wherein the examiner is interpreting the remote resource as the Internet);

establishing a physical hardware connection between the first application and the remote resource (see ¶0028);

receiving a second request from a second application located on the same client computer as the first application to connect to the same remote resource (see ¶0023);

using the same established physical hardware connection for the second application so that the first application and second application share the physical hardware connection to the remote resource (see ¶0023, "using the existing connection");

using a centralized connection manager, maintaining a record of which applications are using the shared connection (see ¶0020 and ¶0025, wherein the connection manager 28, impliedly maintains some record of which applications are using the shared connection so that it can determine whether all clients 18 have disconnected from the connection 12 in ¶0025);

in response to a disconnection request from either the first or second application, maintaining the connection while at least one of the applications has not disconnected and remains in the record and otherwise disconnecting the physical hardware connection (see ¶0025 and ¶0029).

As per claim 24, Wilson further teaches wherein the connection is a dial-up

connection between a modem and an Internet service provider (see Fig. 8, ref. 16a, and

¶0015).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 7, 8, 10, 18, and 19 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Wilson (US 2002/0087698) in view of Gase (US 6,363,081)

("Gase").

As per claim 7, Wilson teaches a computerized method comprising:

Receiving, form a first application on a client computer (see ¶0016 - ¶0017,

clients 18 running on "processor-based system", read as first application on a client

computer), a first request (i.e. a request to register with the connection manager, see

¶0023), at a connection manager (see Fig. 3, ref. 28 and ¶0023), for connection to a

remote resource (see "Internet", Fig. 1, ref. 14);

upon receiving the first request for connection, creating the connection between the first application and the remote resource when a physical hardware connection (i.e. dial-up connection) between the computer and the remote resource is not already established (see ¶0028);

receiving, at the connection manager, a second request from a second application for connection to the same remote resource as the first application (see ¶0022-¶0023), the first application, the second application and the connection manager all being located on the same client computer (see Fig. 1, ref. 18c, 18b, and 28, respectively).

sharing the connection to the remote resource between the first and the second application (see abstract "multiple clients use the same connection"), wherein sharing the connection includes having the first and second applications using the same physical hardware connection to the remote resource (see ¶0003, ¶0028, and ¶0036, wherein the first and second applications are using the same dial-up connection to the internet);

receiving a request for a disconnection from either the first or second application for disconnection from a remote resource (i.e. a request to terminate the connection, see ¶0003, ¶0028-¶0029, and ¶0036);

Furthermore, Wilson teaches disconnecting the physical hardware connection upon detecting that all clients have disconnected from the connection (see ¶0025) and maintaining the connection when a client is still registered (see Fig. 3, and ¶0003, ¶0028-¶0029, and ¶0036, wherein the connection is maintained as long as one client is still connected).

However, Wilson does not expressly teach a data structure for registering an identifier associated with a client connection request; and, upon a client requesting disconnection from the physical hardware connection, deleting from the data structure, an identifier associated with the client disconnection request, whereby the physical hardware connection is disconnected when the deleted identifier is the last identifier of within the data structure.

Nevertheless, in the same art of computer-to-computer session/connection establishing, Gase teaches a system for sharing a connection between multiple processes (i.e. secondary/primary applications) (see abstract). Furthermore, Gase teaches that the system maintains a distribution list of registered processes that are sharing the connection (read as a data structure, see col. 3, lines 38-45). Thus, upon a process registering with the shared connection, identification information associated with the registered process is added to the data structure (see col. 5, lines 52-62). Furthermore, upon a connected process disconnecting from the shared connection, a drop registration message is delivered by the process to remove the registration information from the data structure (see col. 5, lines 52-62).

A person having ordinary skill in the art (PHOSITA) would have been motivated to modify the teachings of Wilson with the teachings of Gase for modifying the connection manager (i.e. Wilson, Fig. 1, ref. 28) to utilize a data structure of client connection identifiers to determine whether all clients have disconnected from the connection before disconnecting the physical hardware connection (i.e. Wilson ¶0025). The motivation for doing so would have been to take advantage of the simplicity and organizational efficiency inherent to a data structure and thus reduced the complexity in using alternative methods for determining whether all clients have disconnected from the connection before disconnecting the physical hardware connection.

As per claim 8, the combination of Wilson in view of Gase further teaches removing an identifier of a request for a connection from the data structure after a period of time after the request is made if a process associated with the identifier is terminated (see Gas ecol. 5, lines 52-63, wherein the processing of the "DROP" command impliedly requires some period of time before the secondary application is de-register from the shared connection).

As per claim 10, Wilson further teaches wherein the connection is a dial-up connection between a modem and an Internet service provider (see Fig. 8, ref. 16a, and ¶0015)

As per claim 18, Wilson teaches a computer-readable medium comprising executable instructions for performing a method comprising:

creating a physical hardware connection in response to a request from a first process to communicate with a remote resource (see ¶0028), the process being located on a client computer (see ¶0016 - ¶0017, clients 18 running on "processor-based system", read as a process being located on a client computer);

using a connection manager, registering multiple other processes requesting communicating with remote resources via the connection (see ¶0020-¶0023) the first process sharing the physical hardware connection with the multiple other processes (see ¶0020-¶0023), the multiple other processes and the connection manager are located on the same computer (see Fig. 1, ref. 18c, 18b, and 28, respectively);

using the connection manager, removing one of the processes when the process requests a disconnection (see ¶0020, "no clients have (or remain) registered with the connection manager", also see ¶0029 "when all the clients 18 have disconnected", which the examiner is interpreting as the processes being removed when the process requests a disconnection)

maintaining the connection when a process requests a disconnection when the connection manager indicates another process is communicating with remote resources via the connection (see Fig. 3, and ¶0003, ¶0028-¶0029, and ¶0036, wherein the connection is maintained as long as one client is still connected); and

disconnecting the physical hardware connection when a process requests a

disconnection when the connection manager indicates that no other process is

communicating with remote resources via the connection (see ¶0025).

Wilson does not expressly teach the connection manager storing identifiers of

multiple other processes requesting communications with remote resources via the

connection, removing an identifier of one of the processes from the stored identifiers

when the process requests a disconnection, wherein the physical hardware connection

is maintained when the stored identifiers indicate that another process is communicating

with remote resources via the connection and disconnecting the physical hardware

connection when stored identifiers indicate no other process is communicating with

remote resources via the connection.

Nevertheless, in the same art of computer-to-computer session/connection

establishing, Gase teaches a system for sharing a connection between multiple

processes (i.e. secondary/primary applications) (see abstract). Furthermore, Gase

teaches that the system maintains identifiers of registered processes that are sharing

the connection (see col. 3, lines 38-45). Thus, upon a process registering with the

shared connection, identification information associated with the registered process is

added to the data structure (see col. 5, lines 52-62). Furthermore, upon a connected

process disconnecting from the shared connection, a drop registration message is

delivered by the process to remove the identification information of the disconnecting

process (see col. 5, lines 52-62).

A person having ordinary skill in the art would have been motivated to modify the

teachings of Wilson with the teachings of Gase for modifying the connection manager

(i.e. Wilson, Fig. 1, ref. 28) to utilize stored client connection identifiers to determine

whether all clients have disconnected from the connection before disconnecting the

physical hardware connection (i.e. Wilson ¶0025). The motivation for doing so would

have been to take advantage of the simplicity and organizational efficiency inherent to a

data structure of client connection identifiers associated with existing client connection.

Such a modification would have reduced the complexity in using alternative methods for

determining whether all clients have disconnected from the connection before

disconnecting the physical hardware connection.

As per claim 19, the combination of Wilson and Gase further teaches the

computer readable medium of claim 18 further comprising executable instructions fro

removing an identifier of a process from the stored identifiers when the process has

terminated (see Gase col. 5, lines 52-62).

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson (US

2002/0087698), in view of Gase (US 6,363,081) ("Gase"), in further view of Block et

al. (US 7,433,955)("Block").

As per claim 9, Wilson teaches wherein the remote resource being the Internet which impliedly contains web servers (see ¶0028 and Fig. 1, ref. 14). However, it is not necessarily the case that the two clients (i.e. Fig. 1, ref. 18b and 18c) are connected to the same web sever.

However, connecting two client processes to the same web server was well known in the art. For example, in the same art of computer network session/connection establishing Block teaches a system that allows two separate client applications (see Fig. 2, ref. 210 and ref. 220) to establish a connection to the same web server (see Fig. 2, ref. 204) (see col. 1, line 64 - col. 2, line 13).

A person having ordinary skill in the art would have been motivated to modify the teachings of Wilson with the teachings of Block for allowing clients 18b and 18c to establish a connection over the Wilson's shared physical hardware connection. The motivation for doing so would have been to allow multiple client applications to simultaneously access various applications running on a single web server.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson (US 2002/0087698), in view of Gase (US 6,363,081) ("Gase"), in further view of Morris et al. (US 7,069,333)("Morris").

As per claim 11, Wilson further teaches the method having plural application sending the connection request and communicating with remote resources over the connection (see ¶0022-¶0023).

However, Wilson does not describe the device as being a wireless device.

Nevertheless, in the same art of computer network session/connection establishing Morris teaches a wireless device using a Winsock based communication network for establishing an internet connection (see col. 22, line 64 - col. 23, line 8).

A person of ordinary skill in the art would have been motivated to modify the teachings of Wilson with the teachings of Morris for using a wireless device. The motivation for doing so would have been to take advantage of the mobility associated with a wireless device.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson (US 2002/0087698), in view of Gase (US 6,363,081) ("Gase"), in further view of Hong et al. (US H2065 H) ("Hong").

As per claim 20, Wilson does not expressly teach periodically removing identifiers of processes from the stored identifiers when the processes have terminated without requesting a disconnect.

However, in the same art of network communications, Hong teaches a system for disconnecting a socket connection when there is no activity on the corresponding connection (see col. 7, lines 42-55).

A person of ordinary skill in the art would have been motivated to modify the teachings of Wilson with the teachings of Hong. The motivation for doing so would have

been to reduce the burden on computer resources required for maintaining any inactive

connections.

Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Wilson (US 2002/0087698), in view of Gase (US 6,363,081) ("Gase"), in further view

of Clark (US 6,598,068)("Clark").

As per claim 22, Wilson does not expressly teach wherein the requests are

received by an operating system located on the client computer.

Nevertheless, an operating system for managing computing resources that are

shared by multiple client applications running on a single machine was well known in

the art. For example, Clark teaches that "during execution, processes use resources,

such as memory, modems, and printers. To take full advantage of resources, operating

systems have been developed which allow multiple processes to share resources" (see

col. 1, lines 15-24).

A person having ordinary skill in the art would have been motivated to modify the

teachings of Wilson with the teachings of Clark for utilizing an operating system to

managing the sharing of a network connection in Wilson's invention. The motivation for

doing so would have been to take full advantage of an operating system's ability to

efficiently manage a shared network connection.

As per claim 23 Wilson further teaches wherein the requests are receiving by the operating system through an application program interface (see ¶0035).

Response to Arguments

Applicant's arguments with respect to claims 7-11 and 18-24 have been considered but are moot in view of the new ground(s) of rejection.

As noted above the examiner is relying on Wilson (US 2002/0087698) for teachings a system for sharing a shared physical hardware connection to a remote resource.

Conclusion

Applicant's amendments on May 20, 2009 in response the non-final office action dated February 12, 2009 necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRENDAN HIGA whose telephone number is (571)272-5823. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Thomas can be reached on (571)272-6776. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BRENDAN HIGA/
Examiner, Art Unit 2453

/Joseph Thomas/
Supervisory Patent Examiner, Art Unit 2453